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ABSTRACT

In fall 2001 staff of the Los Rios Community College District Office of Institutional Research collaborated with occupational deans, academic deans, and faculty to develop and administer a survey of former Drafting and Engineering Design Technology students. The survey was designed to determine how well courses had met the needs of former drafting and engineering design technology students who had earned degrees or certificates and those who had not. A total of 460 surveys were sent to former students, with 166 returned (response rate of 36.1%). Most of the respondents (66.9%) were graduates of American River College, and at each of the colleges, most of the respondents were nonreturning students, indicative of the student population in this program. Many are taking a few courses to learn new skills or upgrade old, rather than to seek a degree or certificate. Tables show the five drafting and engineering design technology courses that students believed had prepared them well for employment, and the five courses they believed had left them not well prepared. Of survey respondents, 49.3% were currently working in Drafting and Engineering Design Technology, and 82.1% of students who earned a degree were actually working in the field. Information is also provided about the salaries of former students and their demographic profile as a group. (SLD)

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ED 479 966

A Survey of Former Drafting & Engineering Design Technology Students

Summary Findings of Respondents District-wide October 2002

Office of Institutional Research
Los Rios Community College District

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American River College | Sacramento City College

A SURVEY OF FORMER DRAFTING & ENGINEERING DESIGN TECHNOLOGY STUDENTS

Summary Findings of Respondents District-wide

October 2002

During Fall 2001 staff of the Los Rios Community College District Office of Institutional Research collaborated with occupational education deans, academic area deans, and faculty to develop and administer a survey of former Drafting and Engineering Design Technology students. The program-specific survey was designed to determine how well courses met the needs of former Drafting and Engineering Design Technology students, both those who earned degrees or certificates as well as those who did not. A total of 460* surveys were sent out to former students, with a total of 166 returned, for a 36.1% rate of return.

Table 1: Drafting and Engineering Design Technology Survey Rate of Return

	Total Surveys Mailed*	Total Surveys Returned	% Returned
ARC	310	111	35.8%
CRC	68	27	39.7%
SCC	82	28	34.1%
TOTAL	460	166	36.1%

* Adjusted for undeliverable mail

Who Responded to This Survey?

The ARC Engineering Design Technology program heavily influences the survey results because it is a much larger program than either the CRC or SCC Drafting programs. Of the 166 former students who responded to the survey, 66.9% were former ARC students. Furthermore, at each of the colleges, higher proportions of respondents are non-returning students (81.3%) rather than degree earners, indicative of the student population that matriculates in this program; many are taking a few courses to learn or upgrade their skills rather than earn a degree or certificate. Across each of the three colleges, survey data indicate that higher proportions of students took courses in areas of AutoCAD and Electrical Design/Drafting while indicating other areas of Drafting and Engineering Design coursework did not apply to their program of study.

Of additional interest is the 38.6% of respondents who chose to answer the survey via the web. Highlights of the survey results follow. For further details please refer to the more comprehensive frequency distribution reports.

Courses Where Students Believed They Were Very Prepared

The following table illustrates Drafting and Engineering Design Technology courses that respondents believed prepared them very well for employment, ranging from 41.4% of respondents very prepared as a result of Introductory CAD to the 14.3% very prepared from Advanced CAD courses.

Table 2: Drafting and Engineering Design Technology Courses Where Students Believed They Were Very Prepared

Rank	Drafting and Engineering Design Technology Courses	% Very Prepared
1.	Introductory CAD	41.4%
2.	Intermediate CAD	29.0%
3.	Architectural Drafting	19.3%
4.	Manual Drafting	18.0%
5.	Advanced CAD	14.3%

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Courses Where Students Believed They Were Not Prepared

High proportions of respondents indicated that many Drafting and Engineering Design Technology courses were not applicable to their employment, because they had not taken the course. However, for those respondents who did evaluate their level of preparation for employment, there were courses where 10% or more of the respondents believed they were not prepared. Solid Modeling had the highest proportion of students (21.5%) indicating they were not prepared for employment after taking the course. Other courses where at least 10% of respondents felt they were not prepared for employment are summarized in Table 3.

Table 3: Drafting and Engineering Design Technology Courses Where Students Believed They Were Not Prepared

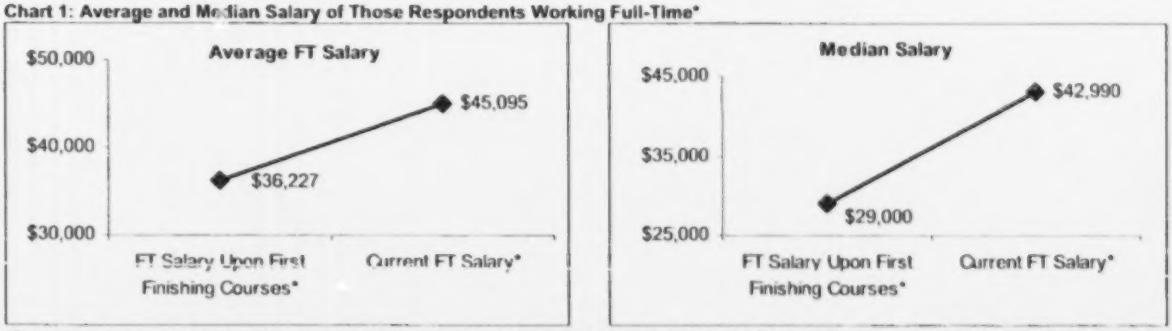
Rank	Drafting and Engineering Design Technology Courses	% Not Prepared
1.	Solid Modeling	21.5%
2.	Piping Design	20.8%
3.	Civil/Land Planning	18.2%
4.	Advanced CAD	18.0%
5.	Structural Drafting	16.5%
6.	Mechanical Drafting	16.3%
7.	Form Z	12.7%
8.	Architectural Drafting	11.1%

Employment and Salary Information

Of the former Drafting and Engineering Design Technology students who responded to the survey, 49.3% are currently working in the Drafting and/or Engineering Design Technology field. Although far more students who responded to the survey did not complete a degree or certificate, 82.1% of those who did earn a degree are actually working in their field of study. This compares to 41.5% of those who did not earn a degree or certificate who are actually working in the drafting/engineering design field. Of those who are currently working, 44.7% are employed in the private sector while 27.6% are working within the public sector. Worth noting is the 7.9% of respondents who are self-employed in their own business.

Survey respondents were also asked a series of questions regarding their salary status based on certain time periods. Information provided from those who are now working full-time in the Drafting and Engineering Design Technology field reveals an average full-time salary of $36,227 upon *first finishing* their Drafting and Engineering Design Technology program or courses that increased to an average $45,095 within two years.

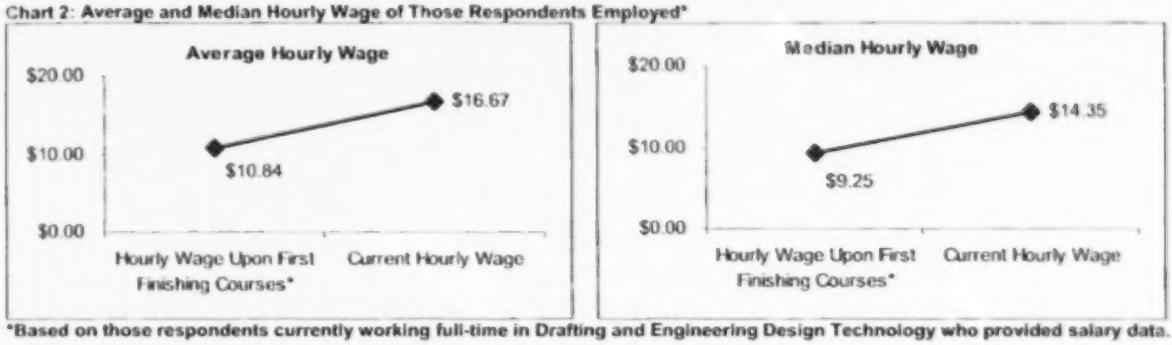
Chart 1: Average and Median Salary of Those Respondents Working Full-Time*



***Based on those respondents currently working full-time in Drafting and Engineering Design Technology who provided salary data.**

Of additional interest is salary information based on hourly wage data provided by survey respondents. Those currently employed in Drafting and Engineering Design Technology reveal an average hourly wage of $10.84 that increased to $16.67 within two years. These employed respondents indicated an average of 24.4 hours worked per week upon first finishing that increased to 33.7 hours per week within two years.

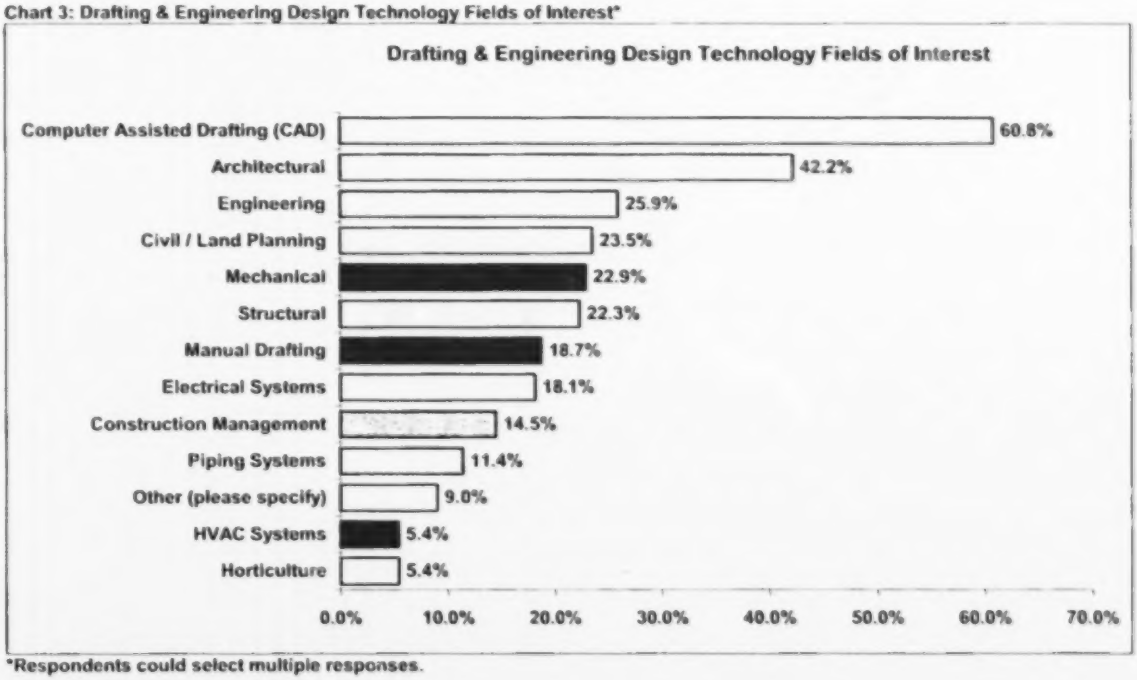
Chart 2: Average and Median Hourly Wage of Those Respondents Employed*



*Based on those respondents currently working full-time in Drafting and Engineering Design Technology who provided salary data.

Chart 3 provides a flavor of the multiple interests former Drafting and Engineering Design Technology students have within their professional field, with Computer Assisted Drafting (CAD) and Architectural drafting being the dominant fields of interest.

Chart 3: Drafting & Engineering Design Technology Fields of Interest*



*Respondents could select multiple responses.

Demographic Profile

The demographic profile of the Drafting & Engineering Design Technology population from which the survey sample was drawn and the profile of survey respondents follow. Of particular interest are the high proportions of students 30 and older in both the sample and respondent population, 58.0% and 64.5% respectively.

Table 5: Demographic Profile of Drafting and Engineering Design Technology Sample Population and Survey Respondents by Proportions

	Sample Population	Survey Respondents
Gender		
Female	35.2%	36.1%
Male	64.8%	63.9%
Ethnicity		
African American	2.4%	1.2%
Asian	14.1%	12.0%
Filipino	3.4%	4.2%
Latino	10.7%	9.0%
Native American	1.5%	1.2%
Pacific Islander	0.4%	0.6%
White	63.3%	67.5%
Other & Unknown	4.1%	4.2%
Age		
Under 18 years	1.9%	2.4%
18-20 years	9.2%	4.2%
21-24 years	16.0%	15.7%
25-29 years	14.9%	13.3%
30-39 years	25.8%	22.3%
40 and over	32.2%	42.2%
By Degree Type		
Degree Earner	11.9%	18.7%
Non-Degree/Certificate Earner	88.1%	81.3%

Survey Highlights

The following are further highlights of the Drafting and Engineering Design Technology survey results:

- Of those respondents who earned a Drafting and Engineering Design Technology degree or certificate, 82.1% are currently working in the field compared to 41.5% of the non-degree and certificate earners who are working in Drafting and Engineering Design Technology.
- This program appeals to our older student population. Reflective of an older student population who are probably juggling school, family and careers, respondents indicated weekday evenings (44.6%) and weekends (27.1%) were the most convenient times to take classes.
- 26.5% are currently taking or are interested in taking courses at a 4-year college or university, while 31.9% are currently taking or are interested in taking courses at a Los Rios college.
- Over half, 57.3% of respondents answered, yes, they would be interested in a short (about 9 hours) continuing education course related to new technology related to Drafting and Engineering Design Technology.
- 45.1% of respondents indicated they were not interested in participating in a Drafting and Engineering Design Technology advisory committee; only 8.5% expressed an interest, while 42.2% responded they might be.

This summary report was written by Betty Glyer-Culver, Research Analyst, LRCCD Office of Institutional Research (IR) and is based on research conducted by the "Former Student Follow-up Studies" team: research design, analysis and report writing -- Betty Glyer-Culver, Research Analyst; Web survey and SQL Server support and development -- Minh La, IT Analyst for Institutional Research; coordination of survey mailings -- Chue Lo-Yang, Secretary. The *Former Student Follow-up* Study Team gratefully acknowledges input related to survey and report development by IR Director, Judy Beachler, program-specific question development by the occupational education and academic area deans and faculty at the colleges and the District Office of Workforce and Economic Development under the direction of Sandy Kirschenmann for Vocational and Technical Education Act (VTEA) funds which partially supported this project in compliance with funding requirements of the Carl D. Perkins Vocational and Technical Education Act of 1998. Additional copies of this report as well as the more comprehensive program level reports can be downloaded from our Web Site at: http://irweb.losrios.edu or by calling 916-568-3131.

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